EXAMINATION

Course code: SFB13114 **ECTS credits:** 10	**Course:** Global Markets and Institutions
Date: 09/12/2019	**Duration:** 4 Hours (written examination)
Allowed aids: Pen, pencils, ruler, simple calculator	**Academic responsible:** Imtiaz Badshah
Grading: A-F	**Attachments:** formula sheet

The Examination:

The examination paper consists of 3 pages (including this page) and a Formula sheet (three pages hand written). Please check that the examination papers are complete before you start answering the questions.

The school exam entails 5 (five) problems. Each problem comprised of several parts. All problems (and its all parts) should be answered/solved.

Please provide answer for each **Part** on a **NEW** page clearly mentioning **Problem** and **Part Number**.

Read the text relating to each problem carefully. If something is unclear, you have to make realistic assumptions about how you understand the problem and how you decide to solve the problem. Any such assumptions must be clearly outlined.

Grading Deadline: 30/12/2019

LYKKE TIL/ BEST OF LUCK!

Problem 1 (20 %)

Part A: Calculate the duration of a $1,000 and 6% coupon bond with three years to maturity. Assume that all market interest rates are 7%.

Part B: If there is a decline in interest rates, which would you rather be holding, long-term bonds or short-term bonds? Why? Which type of bond has the greater interest-rate risk?

Part C: What is the expected return on the Exxon-Mobil bond if the return is 12% two-thirds of the time and 8% one-third of the time?

Problem 2 (20 %)

Part A: What effect would reducing income tax rates have on the interest rates of municipal bonds? Would interest rates of Treasury securities be affected and, if so, how?

Part B: 1-year T-bill rates are expected to steadily increase by 150 basis points per year over the next 6 years. Determine the required interest rate on a 3-year T-bond and a 6-year T-bond if the current 1-year interest rate is 7.5%. Assume that the Pure Expectations Hypothesis for interest rates holds.

Part C: "If stock prices did not follow a random walk, there would be unexploited profit opportunities in the market." Is this statement true, false, or uncertain? Explain your answer.

Problem 3 (20 %)

Part A: In what ways can the regional Federal Reserve banks influence the conduct of monetary policy?

Part B: If the required reserve ratio is 10%, how much of a new $10,000 deposit can a bank lend? What is the potential impact on the money supply? Recall from introductory macroeconomics that the money multiplier is 1/(required reserve ratio).

Part C: Do you think that the 14-year nonrenewable terms for governors effectively insulate the Board of Governors from political pressure?

Problem 4 (20 %)

Part A: Why do businesses use the money markets?

Part B: The annualized discount rate on a particular money market instrument is 3.75%. The face value is $200,000 and it matures in 51 days. What is its price? What would be the price if it had 71 days to maturity?

Part C: M&E Inc. has an outstanding convertible bond. The bond can be converted into 20 shares of common equity (currently trading at $52/share). The bond has 5 years of remaining maturity, a $1,000 par value, and a 6% annual coupon. M&E's straight debt is currently trading to yield 5%. What is the minimum price of the bond?

Problem 5 (20 %)

Part A: Identify the cash flows available to an investor in stock. How reliably can these cash flows be estimated? Compare the problem of estimating stock cash flows to estimating bond cash flows. Which security would you predict to be more volatile?

Part B: Consider a 30-year, fixed-rate mortgage for $100,000 at a nominal rate of 9%. A S&L issues this mortgage on April 1 and retains the mortgage in its portfolio. However, by April 2, mortgage rates have increased to a 9.5% nominal rate. By how much has the value of the mortgage fallen?